

Year Group: Year 6

Term: Autumn 1

Topic: Animals Including Humans

National Curriculum Links

Pupils in Key Stage Two should be taught to:

- identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
- recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
- describe the ways in which nutrients and water are transported within animals, including humans

Working Scientifically

- plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- use test results to make predictions to set up further comparative and fair tests
- report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- identify scientific evidence that has been used to support or refute ideas or arguments.

Prior Learning

- Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. **(Y2 - Animals, including humans)**
- Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. **(Y3 - Animals, including humans)**
- Describe the simple functions of the basic parts of the digestive system in humans. **(Y4 - Animals, including humans)**
- Identify the different types of teeth in humans and their simple functions. **(Y4 - Animals, including humans)**

Future Learning

- The consequences of imbalances in the diet, including obesity, starvation and deficiency diseases. **(KS3)**
- The effects of recreational drugs (including substance misuse) on behaviour, health and life processes. **(KS3)**
- The structure and functions of the gas exchange system in humans, including adaptations to function. **(KS3)**
- The mechanism of breathing to move air in and out of the lungs. **(KS3)**
- The impact of exercise, asthma and smoking on the human gas exchange system. **(KS3)**

Common Misconceptions

Some children may think:

- your heart is on the left side of your chest
- the heart makes blood
- the blood travels in one loop from the heart to the lungs and around the body

- when we exercise, our heart beats faster to work the muscles more
- some blood in our bodies is blue and some blood is red
- we just eat food for energy
- all fat is bad for you
- all dairy is good for you
- protein is good for you, so you can eat as much as you want
- foods only contain fat if you can see it
- all drugs are bad for you.

Global Goals

This global goal would be perfect to fit with this unit of learning:

- [Add your activities here](#)



Catholic Social Teaching

- [Add your activities here](#)

Knowledge and Skills Objectives	Activity	Differentiation
<p>Lesson One I understand the functions and importance of blood.</p> <p>Add w/s here</p>	<p>Children to watch video on blood, looking at how blood moves around the body. (BBC bitesize)</p> <p>Children to then see PPT about four functions of blood and how they support the body.</p> <ul style="list-style-type: none"> -plasma -white blood cells -red blood cells -platelets <p>Children to understand each different function of blood and its role within the body .</p> <p>For example, red blood cells are like postmen, they drop off oxygen. Plasma has nutrient and hormones. White blood cells are like policemen stopping bacteria and viruses etc.</p> <p>Children to watch class experiment with fruit, oil and water. This is an example of what can be seen under a microscope and what we see.</p> <p>Explain to children that when you look at blood through a microscope you see all the different cells. But when we see blood we just see red (almost like water) liquid. So when we blend the fruit (platelets, WBC, RBC) and oil (Plasma) together that's blood that we see. But before blending this is what is under a microscope.</p>	<p>SEN -</p> <p>LA - Draw pictures with labels</p> <p>MA - Draw pictures with sentence explaining what the function is</p> <p>HA - Draw pictures explain what each component is and how they work make reference to how they work together.</p> <p>All children to draw and explain what each function of blood is and how it works within the body.</p>

Knowledge and Skills Objectives	Activity	Differentiation
<p>Lesson Two I can understand the hearts role within the human body and its functions.</p> <p>Add w/s here</p>	<p>Recap previous lesson about blood and the role blood plays within the body see lesson1.</p> <p>Explain to children that everytime the heart beats it is sending blood around the body (WBC, RBC, plasma, platelets). Ask children to put hand on chest and feel heart beating. The heart never stops which makes it an amazing organism.</p> <p><u>The heart</u> Four chambers, each chamber is blood filled and has a different role. Draw this for them to see. Two chambers: Atria (both together called atrium). These are located top sides from each other. Left atrium and right atrium.</p> <p>Two chambers: Ventricles (left and right) their job is to squirt out blood which travels to body and lungs. These two chambers are split in half by the septum (thick mucus).</p>	<p>SEN -</p> <p>LA - Children to have picture of heart in books and be able to label the heart.</p> <p>MA - Children to have picture of heart in books and be able to label the heart.</p> <p>HA - Children to have picture of heart in books and be able to label the heart. Write an explanation as to how the heart and blood link together.</p>
Knowledge and Skills Objectives	Activity	Differentiation
<p>Lesson Three I understand how the respiratory system works.</p> <p>Add w/s here</p>	<p>Children should understand that the respiratory system is the main system that allows oxygen to travel around the body, to vital organs and muscles. Chn should make links to RBC for this.</p> <p>Teach chn that oxygen is taken to and from the lungs by the inhaling and exhaling that we do daily. Oxygen is taken during</p>	<p>SEN -</p> <p>LA - write own paragraph about the respiratory system explaining its importance for humans and animals. (heavily guided layout worksheet and diagrams)</p>

	<p>inhaling and carbon dioxide (waste gas) is let out during exhaling. Make reference to the nose and mouth.</p> <p>Experiment with balloon and plastic bottle to show how this works. As the balloon fills to with oxygen that is the lungs getting bigger. Then release the balloon into a plastic bottle so that children can see the 'condensation' (oxygen) land on the bottle this is what happens to our bodies. Fill balloon up again and just release in the air (carbon dioxide) leaving the body.</p>	<p>MA - write own paragraph about the respiratory system explaining its importance for humans and animals.</p> <p>HA - write own paragraph about the respiratory system explaining its importance for humans and animals. Make links to coughing and sneezing (these help the respiratory system stay clean and not blocked)</p> <p>Ask children to write up what happened during experiment. (stick pic collage in books).</p> <p>Give children chance to explain how the respiratory system links with the last 2 lessons on blood and heart. They should be able to make the link between how they all work together to create one big system. Eg RBC picking up oxygen.</p>
<p>Knowledge and Skills Objectives</p>	<p>Activity</p>	<p>Differentiation</p>

Lesson Four

I know the impact that diet and exercise has on the body.

Linked to PE & PSHE

Children to explore how diet and exercise impacts the body.

They should use previous knowledge about how the circulatory system works and the impact that a healthy lifestyle plays.

Do You Want a Piece of CAKE?	
Lesson Length	45-60 minutes
Introduction	The previous session in this unit considered different ways in which children might feel pressured by those around them, particularly their peers. This session discusses the issue of consent and bodily autonomy, and it equips children with the ability and confidence to say 'no'. In a later session, Module 2, Unit 3, Session 3: Physical Abuse, we will explore the topic of abuse.
Learning Objectives	Pupils will: <ul style="list-style-type: none"> Understand what consent and bodily autonomy means; Discuss and reflect on different scenarios in which it is right to say 'no'.
Success Criteria	Children will: <ul style="list-style-type: none"> Engage with films, roleplay and discussion activities Successfully complete the relevant activity in 'Module 2 Activity Workbook'
Attributes to be developed	<ul style="list-style-type: none"> Loving Courteous Friendship Empathy

The most important area of this lesson is to create a positive body image for children. Using Ten Ten resources about peer pressure. Children need to explore both the negative and positive effects of diet.

discuss that children aged 7-10 needs lots of energy and nutrients because they're still growing. Average 10-year-old boys: 2032 calories; girls 1936 cal. But this depends on how active they are. Men - 2500; women 2000.

No differentiation.

Ideas

- Children to create their own healthy lunch.
- Create a questionnaire to ask children in the school about healthy lifestyle (research and then write up results).
- Design a menu - Mr Hemington to pick winning menu based of healthy choices.
- Design a poster about positive Body images.

Knowledge and Skills Objectives

Activity

Differentiation

Lesson Five

I understand the impact drugs has on the bodies functions/

Add w/s here

Linked to PE & PSHE

For this lesson we are using a plan created my IMatters which we used last year as part of a pilot lesson. Children responded well.

See plan attached at bottom called lesson 5.

Group work

Children create a presentation around how substances can impact our bodies. A poster to display the impacts.

Knowledge and Skills Objectives

Activity

Differentiation

<p>Lesson Six I understand how nutrients and water is carried within animals.</p> <p><u>Add w/s here</u></p>	<p><u>Our bodies are incredible</u></p> <p>To look at how animals and humans adapt depending on where they live. This lesson is based around a research task in which children will be asked to create a report based on the title above '<u>OBAT</u>'.</p> <p>Children will have the opportunity to research one animal or human that has pushed their bodies to do some incredible feats. E.G Wim Hof, Usain Bolt, Mo Farah (humans), animals, elephants, camels, eagle. Think about how their bodies have adapted to their job or environment.</p>	<p><u>SEN -</u></p> <p><u>LA -</u></p> <p><u>MA -</u></p> <p><u>HA -</u></p> <p style="color: red;">Add differentiation</p>
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<p>Applied Write Opportunities</p> <ul style="list-style-type: none"> • Our bodies are incredible (see lesson 6) • How the respiratory system works (see lesson 3)

Assessment Opportunities

<ul style="list-style-type: none"> • Use the role play model to explain the main parts of the circulatory system and their role • Can use subject knowledge about the heart whilst writing conclusions for investigations • Can explain both the positive and negative effects of diet, exercise, drugs and lifestyle on the body • Present information e.g. in a health leaflet describing impact of drugs and lifestyle on the body

Key Vocabulary

<p>Tier 2: Caffeine, Tabacco, Inhalants, Alcohol, Cannabis, Aorta, Arteries Capillaries Carbon Dioxide Oxygen Pulse / beat Veins Organ Lungs Inhale Exhale White blood cells Red blood cells Platelets Plasma Nutrients Hormones Arteries Veins</p> <p>Tier 3 Septum, Atrium</p> <p style="color: red;">Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle</p>



Types of Drugs - Year 6 - Lesson 5

PSHE Programme of Study Links:

KS2 H17. Which, why and how, commonly available substances and drugs (including alcohol, tobacco and 'energy drinks') can damage their immediate and future health and safety; that some are restricted and some are illegal to own, use and give to others.

Learning Objectives:

- To know which, why and how, commonly available drugs can damage health and safety and the law relating to these.

Time	Session Outline	Slide	Learning Outcomes Learners will be able to:	Resources
5	Introduce the topic to pupils, explaining that they will be learning about how some drugs affect health and safety and how some are legal/illegal to own or give to others. Clarify that there is understanding amongst pupils about what is legal/illegal. You may wish to invite pupils to share examples of legal/illegal/prescription medicines that they have heard of.		Setting the scene	
25	Divide the class into small groups and explain that each group will be working as a team to research a drug and prepare a presentation about the effects of the drug. You may wish to give pupils copies of a body outline for them to record their ideas or you may wish to ask them to use ICT to prepare a presentation. Give each group a different drug card set to support their research.		<ul style="list-style-type: none"> Identify some common effects of some commonly used drugs. 	Body boards
30	Invite pupils to take turns in presenting to their peers. Ask pupils that are listening to the presentations to choose 3 facts that they feel are important to know and record it on the Drugs Worksheet.		<ul style="list-style-type: none"> Develop and present to peers (as part of a team) about the effects of one commonly available drug. 	Drugs Worksheet